

## PURE (aka PERFECT) COMPETITION CHAPTER 8

### INTRODUCTION

**OBJECTIVE:** Economic Efficiency (AS DISTINCT TO EQUITY)

**GOAL OF ACTORS:** Profit maximizing output for the firm

**ENVIRONMENT:** Market structure...A Continuum;

*Pure Competition → Imperfect Competition → Oligopoly → Monopoly*

**OUTCOME:** Industry results regarding price, output, and efficiency of production.

### **ECONOMIC EFFICIENCY—A REMINDER**

Trying to “get the most out of you effort" or, for a *GIVEN RESOURCE* get the *MAXIMUM OUTPUT* → same as producing a *GIVEN OUTPUT* with *MINIMUM RESOURCES*

**Efficiency as a relevant economic (social) goal, but not the only goal...issues such as equity, fairness and sympathy (concern) may also be relevant...Much of what the debate in Eastern Europe and the former Soviet Union (and sometimes in the United States) is all about.**

## MARKET STRUCTURE

PERFECT COMPETITION as we will see, it turns out that the closer you are to "perfect competition, the greater the efficiency (*as an approximation*) **assuming no significant returns to scale**

**The determinants (essence) of market structure is the number and size of firms)**

1. **nature of the product**, extent to which it can be differentiated...milk, oranges, wheat...gasoline...tooth paste, yogurt.....cameras.....cars
2. **scale of operation** can you reach an "efficient" (inexpensive) rate of production with a low level of output....grocery store vs. Stealth Bomber
3. **barriers to entry**

besides issues of scale of plant, which determines how much investment (money) must be made available to investor (owner) to enter the industry, matter of A) **advertising expense** (if the competitive products are highly differentiated) and B) **control of special aspects of the product or production process**

**A** occurs with strong BRAND LABELING

**B** occurs with patents and copyrights (or government granted franchise)

IN COMPETITIVE MARKETS, one assumes

- ➔ a homogenous product (little if any advertising, except by industry),
- ➔ and efficient firm doesn't have to be large, and no barriers to entry (**meaning, among other things, that any firm can, and as we will see, must use the most efficient technology**)

(our example of the Nickelodeon works reasonably well...notice, most of the advertising is **informational as opposed to persuasive**--more on this shortly)

## THE OUTPUT DECISION

REMINDER FROM CHAPTER 7, regarding basic assumption---the firm is a profit maximizer

And as we know, this maximum occurs when the difference between TR and TC is greatest (and positive); can be understood verbally, geometrically, mathematically, any of these versions imply

PROFITS AT A MAX WHEN MARGINAL REVENUE = MARGINAL COSTS

There can be production at  $MC = MR$ , but making a "loss," i.e., price is less than total costs. In the **SHORT RUN**, as we've already discussed in the previous chapter, firm would produce so long as **variable costs are covered**.

## THE FIRM'S OUTPUT DECISION

COSTS DERIVED ALREADY.....NEED REVENUE>>>>>>

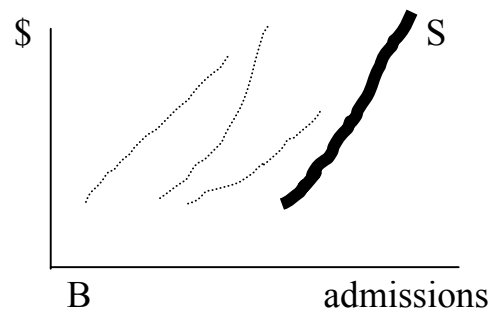
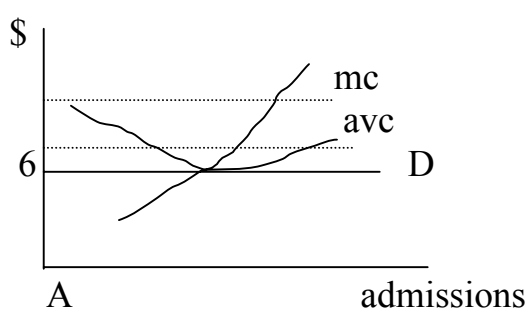
NOTION OF FIRM AS A PRICE TAKER (example of Nick being able to get as many customers as desired at a given price)

THIS YIELDS A HORIZONTAL DEMAND CURVE FOR THE FIRM...WHICH IS ALSO EQUAL TO THE AVERAGE AND MARGINAL REVENUE...(all familiar concepts by now)

given firm's demand curve, and with production taking place where  $MR = MC$ , profit maximizing firm's output is determined>>>>>Refer to graphs on pages 32 ff from Chapter 7 notes.

**INDUSTRY SHORT RUN EQUILIBRIUM-number of firms given.**

1. Each (all firms) are at least covering variable costs.
2. Industry output is simply the sum of each individual firm's supply (i.e., a horizontal summation of the marginal cost curves above the variable cost); that is, some firms are covering more that total costs, some making short-run losses...IN THE SHORT RUN!



In graph A, notice how, as the price rises above \$6, each new demand curve (dotted) will trace a series of points along the firm's marginal cost curve, which thus is the firm's **supply** curve. In graph B, each firm's supply curve is added horizontally to get the **industry supply curve** (S, heavy line)

**INDUSTRY LONG RUN EQUILIBRIUM (aka NIRVANA)**

1. Firms making losses will leave.
2. Firms covering costs and better will remain.

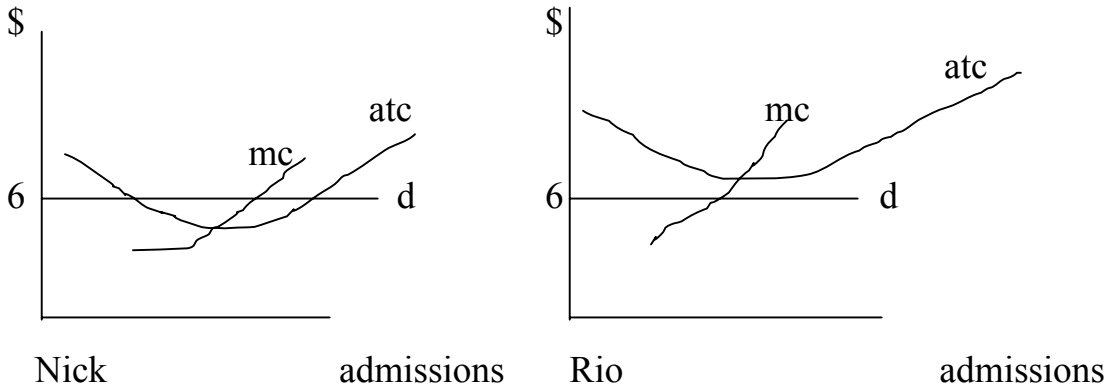
**NOTION OF 'EXCESS' OR 'ECONOMIC' ABOVE 'NORMAL' PROFITS...THE LATTER BEING INCLUDED IN THE AVERAGE TOTAL COST CURVE.**

3. And with excess profits, two things will happen:
  - A. **ENTRY** (Leading to an increased supply)
  - B. And consequently **A FALL IN PRICE.....Eventually eliminating excess profits**

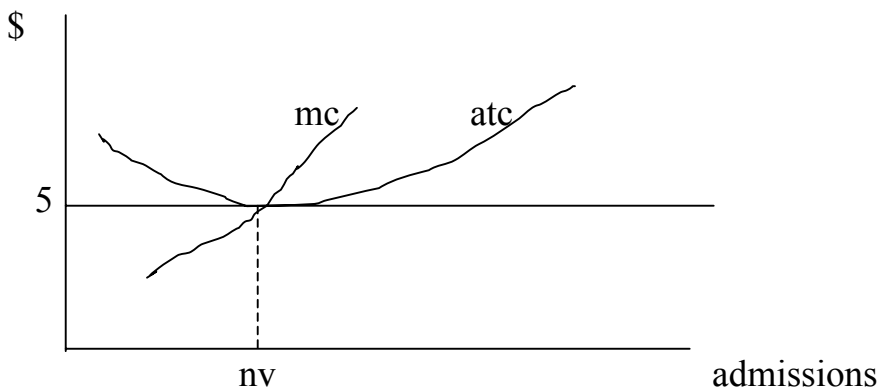
**Nirvana where final equilibrium at lowest point on ATC---  
INDUSTRY OUTPUT PRODUCED AT THE LOWEST PER UNIT COST  
and EFFICIENCY ATTAINED!!!**

**A Second happy outcome: People get what they want, that is, changes in demand lead to changes in price (which leads to exit or entry) depending on the direction of change in demand**

## NIRVENA IN GRAPHS



Assume at the moment that with a price of \$6, the Nick is making more than normal profits, and the Rio, while covering variable costs, isn't fully paying the rent (i.e., not covering all of its fixed costs). Next year, the Rio will not renew its lease. That leaves the Nick making good money. In fact, the Nick is making more profits than necessary for it to stay in business, what we call excess profits. One of two things will happen, or both: the Nick will expand, and or other firms will enter the Santa Cruz film industry. As this happens, the MARKET SUPPLY will shift outward, and prices will FALL. In other words, the demand curve for each firm will shift downward, slowly reducing excess profits. (As the Nick expands, and other firms enter, it may also be the case that costs rise...which will also reduce excess profits.) When will the process end??? When there are no excess profits to entice expansion and new entry!! AKA Nirvana, as the graph below indicates.



**With ticket prices falling to say \$5, notice that at admissions level, nv, we truly are at nirvana; in the sense that a) there are no excess profits, b) prices are as low as possible, assuming firms are entitled to make normal profits, and c) each firm is producing at the lowest (most efficient) point of the average total cost curve**

(BRIEF DISCUSSION IN LECTURE OF CONSTANT, INCREASING AND DECREASING COST INDUSTRIES) Issues is simply what happens to the industry supply curve with increasing number of firms...depends on economies and or dis-economies of scale, and whether factors employed by the firms rise in price themselves

